

# SPANISH SUBSTRATE INFLUENCE ON MIAMI LATINO ENGLISH:

## PROSODIC AND VOCALIC DEVELOPMENTS

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## Changing Miami Demographics

- 1960: 4% Cuban, 81% Anglo White, 15 AfAm
- 1970: 24% Hispanic
- 1980: 36% Hispanic
- 1990: 49% Hispanic
- 2000: 57% Hispanic
- 2010: 65% Hispanic, non-Hispanic White 15%
- 2010: Miami City 79% Latino

## “Maria”

- 22 year old, Cuban American
- Born in Cuba
- Moved to Miami with Cuban parents at age 3
- Speaks to mother in English, father in Spanish
- All primary, secondary, & post-secondary education in English

## “MARIA”



*I thought I spoke English perfectly, before, like when I was like fourteen, and then I traveled to Tennessee for the first time, yeah like and I was like, I mean I guess I had always traveled there but when I was fourteen I realized, that, someone was like, oh but you're like, you're like you know you're from Miami or you're from, you're, you're like Hispanic. I'm like how can you tell and they're like 'what do you mean your accent is like so strong.' I'm like, 'really?' And they're like 'yeah, like really strong.' I'm – and then like in Miami everybody speaks the same. We're like, everybody that I associate myself with, they speak the same*

## Non-English Substrate Influence on American English

- Immigrant language influences often persist even after the immigrant language is lost (Howell 1993; Winford 2005; Trudgill 2010).
- Children of the immigrant generation have been shown to “follow the pattern of their peers” (Labov 1991; Chambers 2003; Labov 2008)
- Sankoff (2002) “exceptions tend to be cases in which the immigrant group and its descendants have become the local majority population” (645-646).

## German, French, Scandinavian, & Native American

**Pennsylvania German area:** various phonological, lexical, and morphosyntactic influence from German (Kurath, 1949; Atwood, 1953; Kurath and McDavid, 1961)

**Minnesota and adjacent areas:** monophthongal /o/ and /e/, final stop devoicing, and some morphosyntactic influence from German and Scandinavian languages (Allen, 1973-76; Purnell, Salmons, and Tepeli, 2005)

**Louisiana:** French influence seems likely, though this is disputed by Dubois and Horvath (2003)

**Native American varieties:** See e.g., Leap (1993) on New Mexico Pueblo English; Anderson (1999) on Cherokee English

## Spanish

**New York City:** phonetic and phonological substrate influence: Spanish-like VOT, frication of voiced stops, etc. (Ma and Herasimchuk, 1971; Newman, 2005)

**Mid-Atlantic South:** phonetic influences on /ai/ (Wolfram, Carter, and Moriello, 2004)

**California:** various phonological, lexical, and syntactic features (Metcalf, 1972; Godinez and Maddieson, 1985; Mendoza-Denton 1997; Fought, 2003)

**Texas and Southwest:** phonological influence (McDowell and McRae, 1972; Thompson, 1975; Hamilton, 1977; Galindo, 1988; Santa Ana A, 1992; Bayley 1994; Thomas, 2001)

*[eighteen] I realized, that, someone was like, oh but you're like, you're like you know you're from Miami or you're from...*

## *Atlas of North American English Labov, Ash, & Boberg (2006)*

*“Florida belongs to a number of marginal areas. It lies outside of the definition of the South as the area of monophthongal /ay/, however it is not completely devoid of Southern character. It belongs to a Southeastern region that is defined as an area of fronting of /o/, and no low back merger.”*



## Variables Analyzed

1. Vowel quality
2. Prosodic rhythm

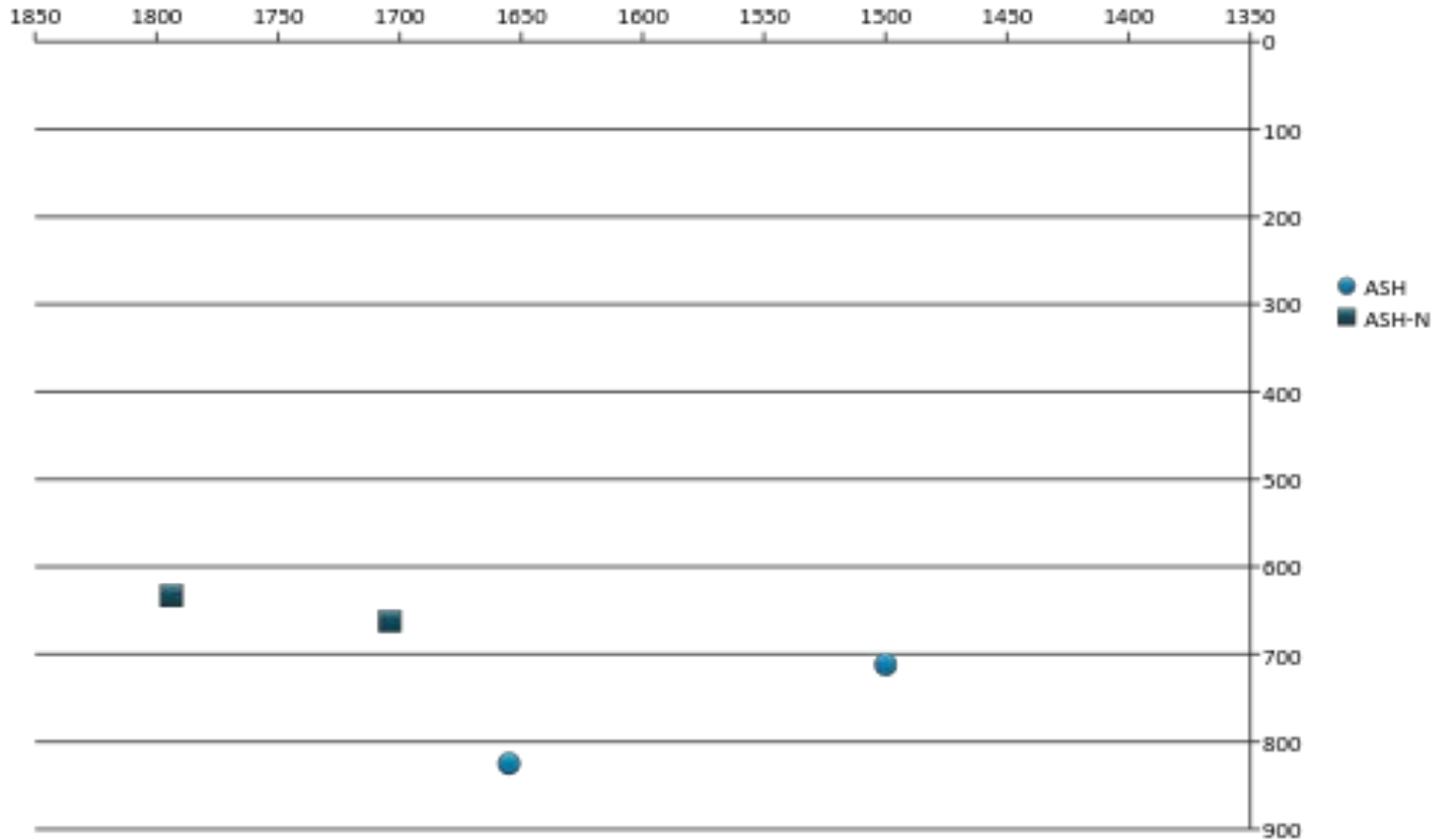
## Vowel quality

- Acoustic analysis conducted for 8 vowel variables including [i, l, ə, ɔ, u, aɪ, æ]

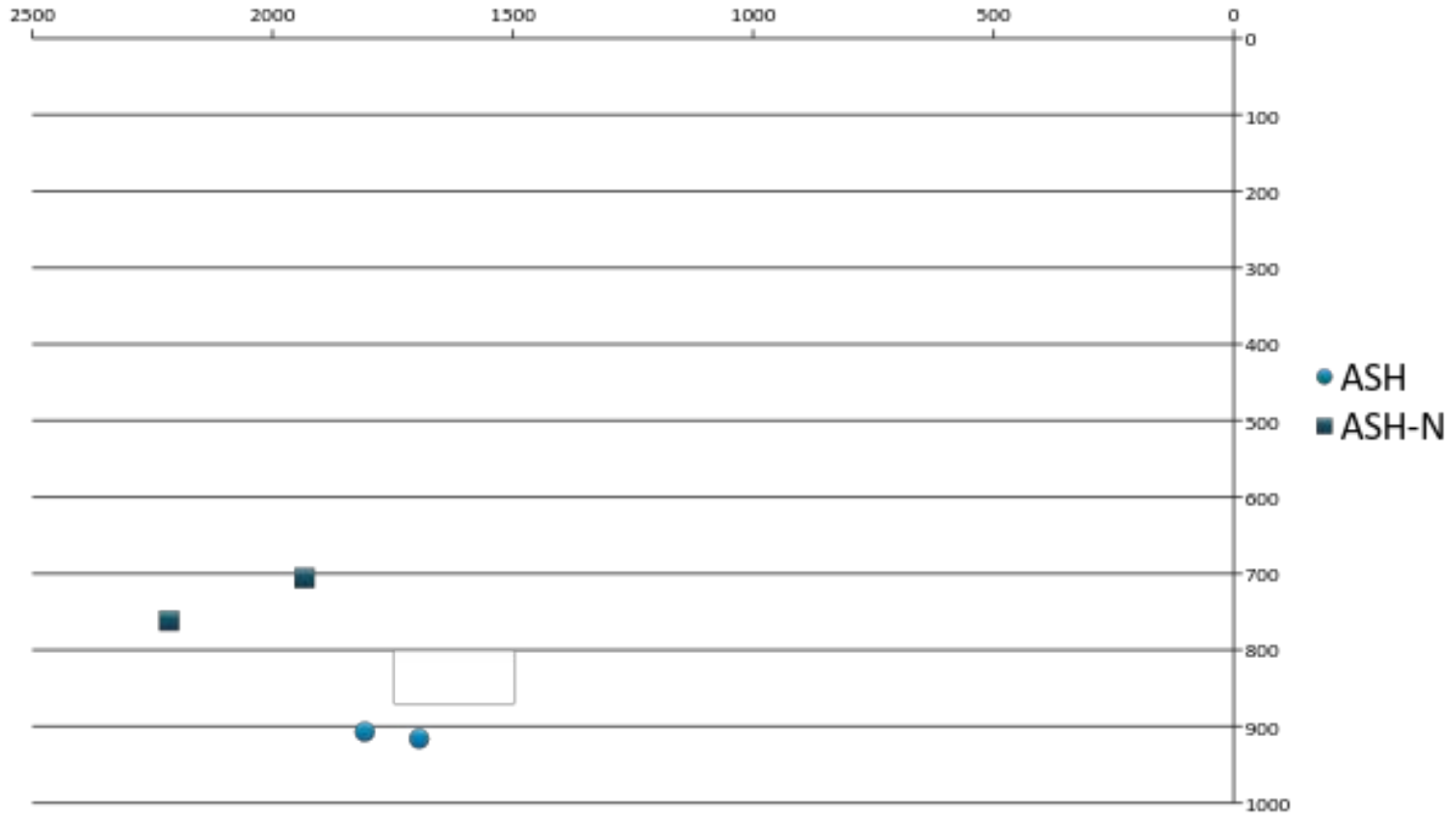
## Vowel quality, methods

- 15 -25 tokens for [æ] in both phonetic contexts
- Approximately 1,000 tokens analyzed
- Each token analyzed using PRAAT
- F1 and F2 measurements taken at the midpoint of the vowel
- Tokens preceding [r, l, g] and following [r, w, j] excluded

# [æ] and [æ-N], male Latinos (red) and non-Latinos (blue)

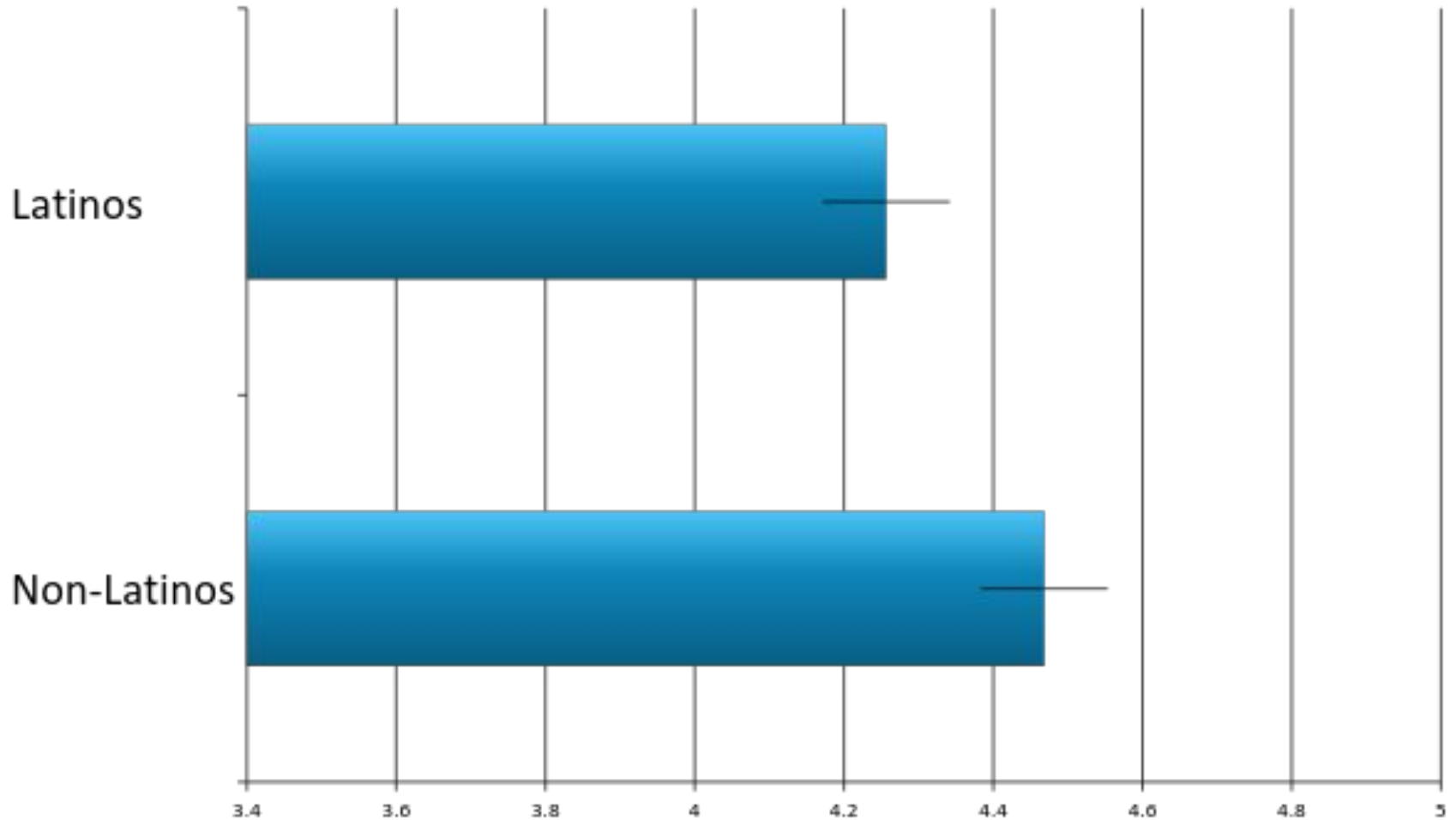


# [æ] and [æ-N], female Latinas (red) and non-Latinas (blue)



# Normalized values for non-pre-nasal [æ]

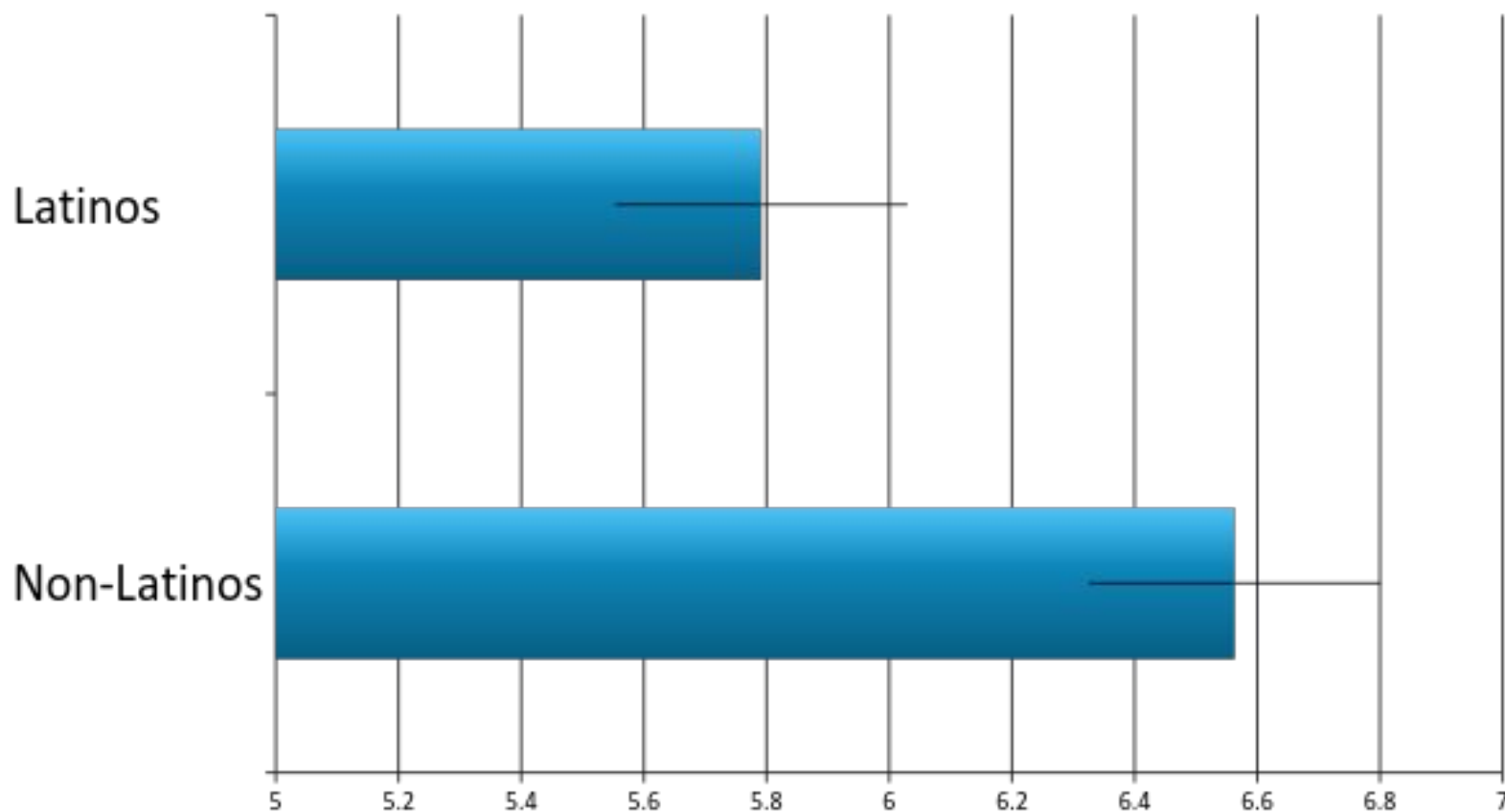
Z2 - Z1



$p < .05$

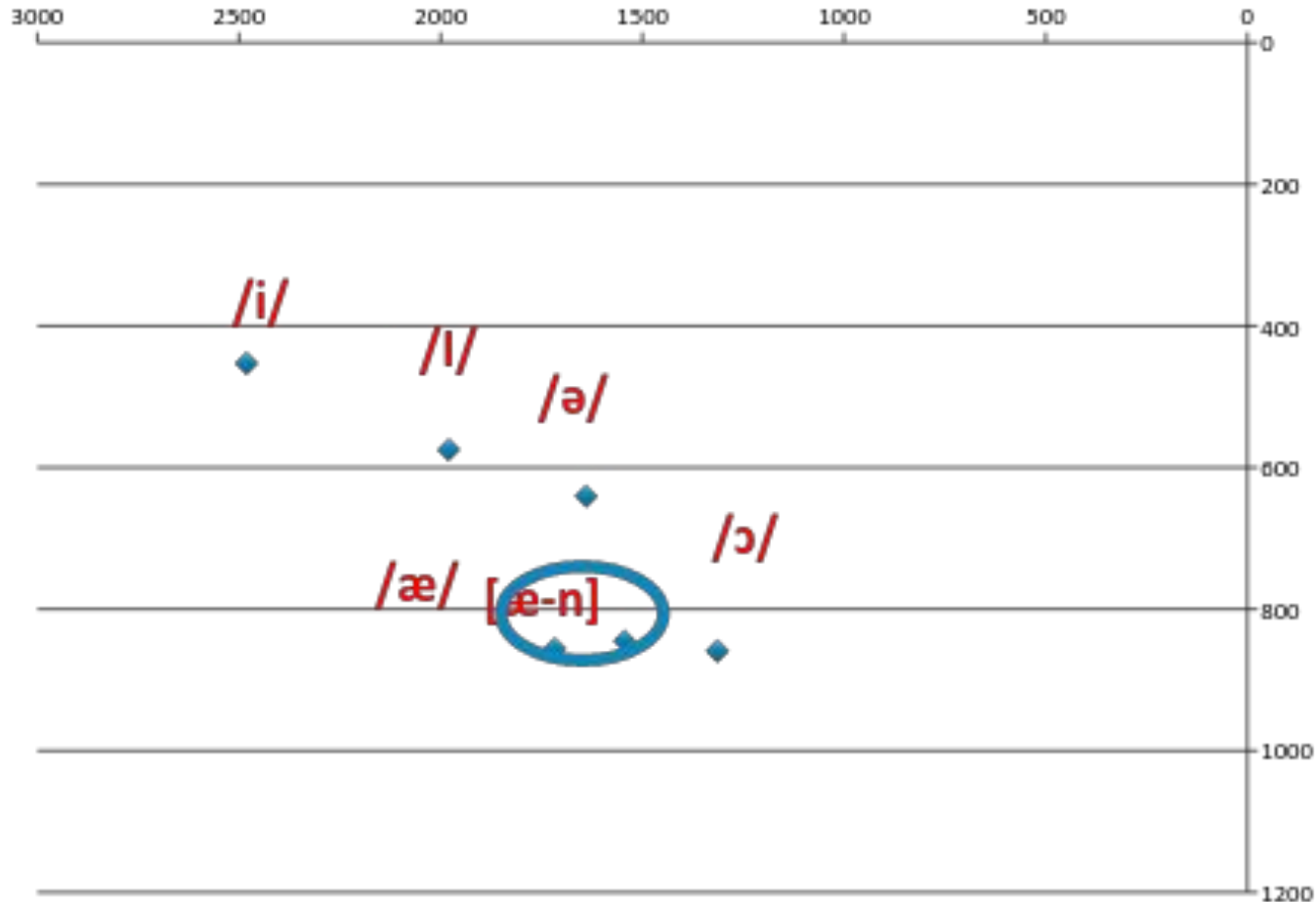
# Normalized values for pre-nasal [æ]

Z2-Z1



$p < .05$

# Vowel Plot for Maria depicting location of [æ] & [æ-n]

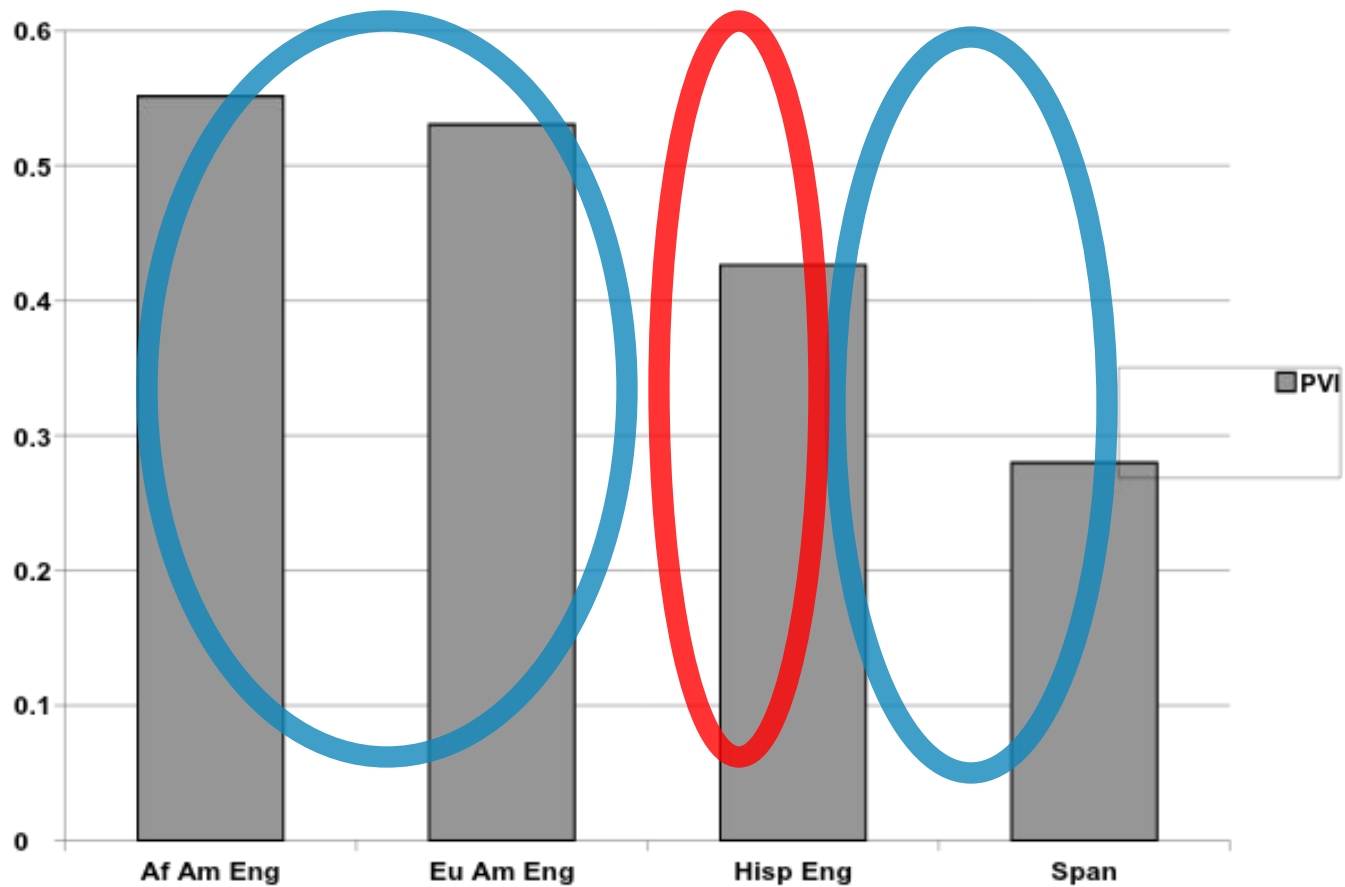




# Studies of prosodic rhythm in U.S. Latino Communities

- Fought & Fought (2003) – syllable timing California Chicano English
- Carter (2005) – intermediate pattern of prosodic rhythm among Latino English speakers

# Prosodic Rhythm – Carter, 2005



## Pairwise Variability Index, Low & Grabe (1995)

- Pairwise Variability Index, Low and Grabe (1995)
- Measures degree of stress- or syllable-timing while controlling for speaking rate

## Pairwise Variability Index, Low & Grabe (1995)

- $\text{ABS Value Syllable A} - \text{Syllable B} / \text{AVG of Syllable A} + \text{B}$

# Prosodic Rhythm – Duration Measurements

A

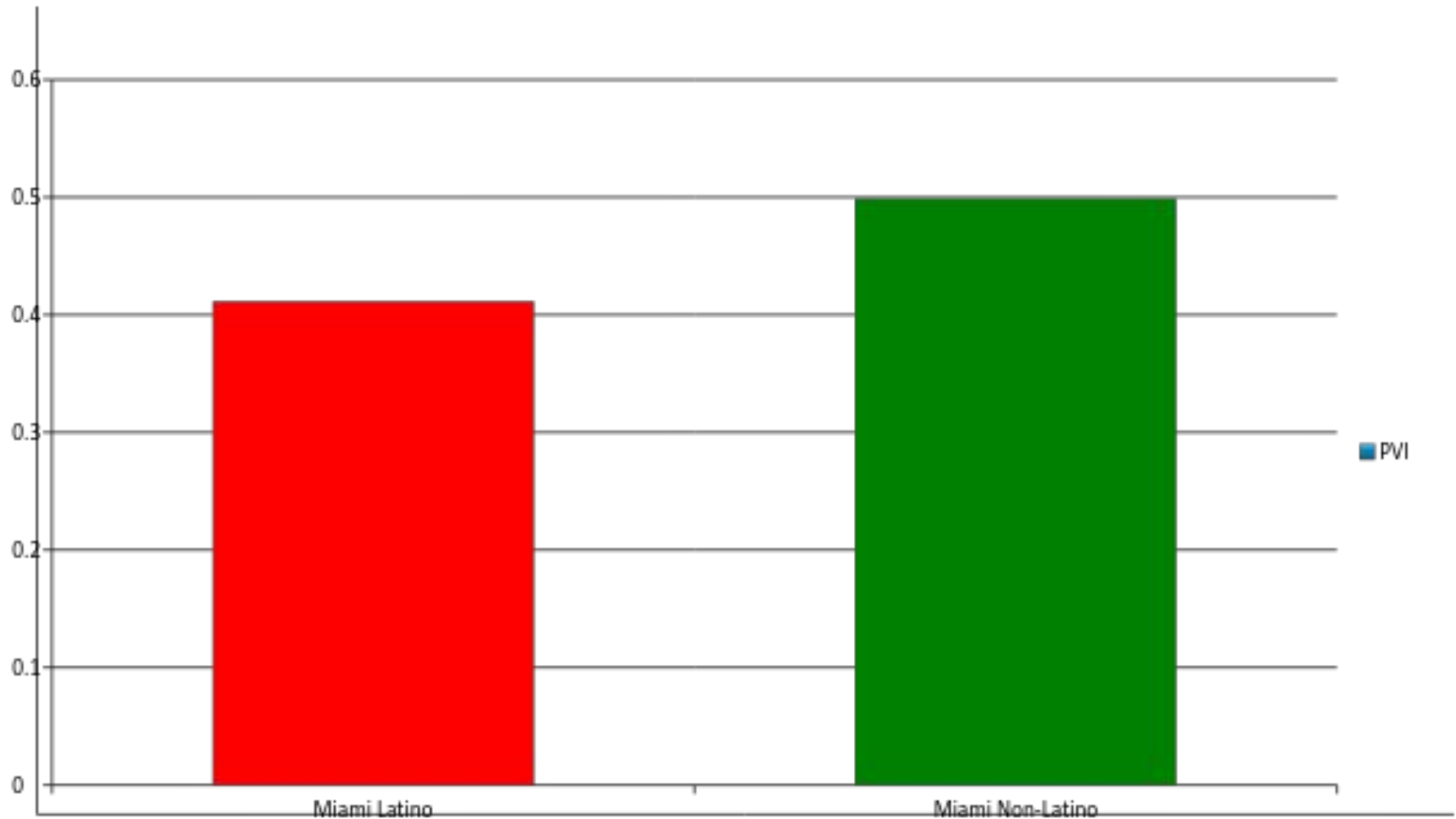
B

C

# Prosodic Rhythm – Participant Sample

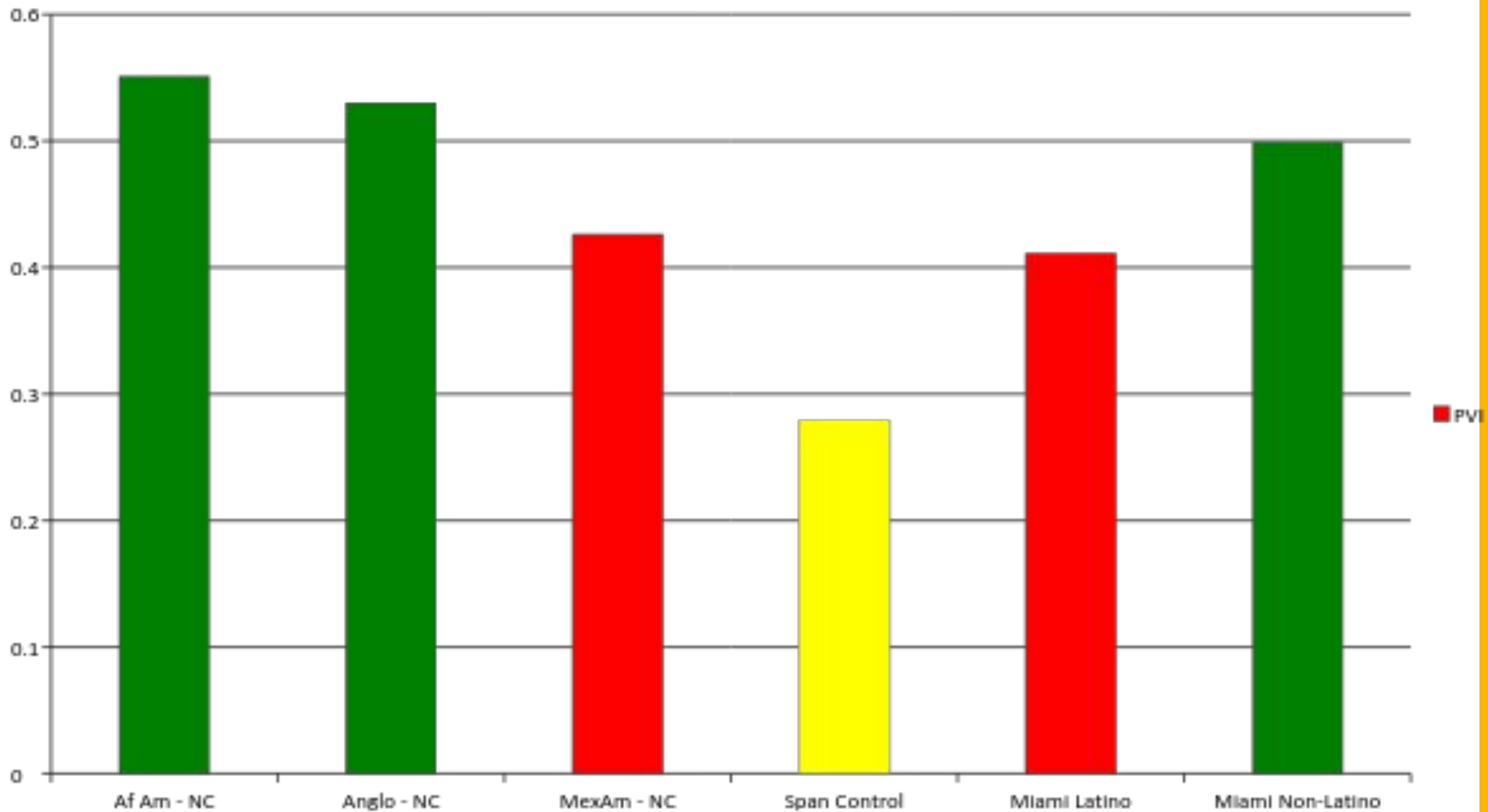
GROUP	Participants N=	nPVI N=
LATINOS	20	2,357
NON-LATINOS	5	485

# PVI Results: Latinos (red); Non-Latinos (green)



$t(24)=4.13, p = 0.00$

# PVI Results, Compared with Thomas & Carter (2006)





# Conclusions

- 1. Second generation Miami Latinos demonstrate an intermediate pattern of prosodic rhythm
  - Data from Miami provide further evidence for durable Spanish substrate influence at the prosodic level
- 2. Distinctive vowel qualities for [æ] with Latinos showing more backed variants on the F2 dimensions
- 3. Individual variation needs further investigation
- 4. Other variables need attention, consonants, intonation

## Acknowledgments

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